

## Catalogue of American Amphibians and Reptiles.

Lieb, Carl S. 1990. *Eumeces tetragrammus*.

***Eumeces tetragrammus* (Baird)  
Four-lined Skink**

*Plestiodon tetragrammus* Baird, 1858:256. Type-locality, "Lower Rio Grande," restricted to Matamoros, Tamaulipas, México by Taylor (1935). Lectotype, designated by Taylor (1935), National Museum of Natural History (USNM) 165662 (original number 3124A), adult, sex unknown, part of a type series collected by John Louis Berlandier and Darius Nash Couch at Matamoros, México, date of collection unknown (examined by author).

*Eumeces tetragrammus*: Cope, 1875:45. First use of combination.

• **Content.** Three subspecies are recognized: *tetragrammus*, *brevilineatus*, and *callicephalus* (see Comment).

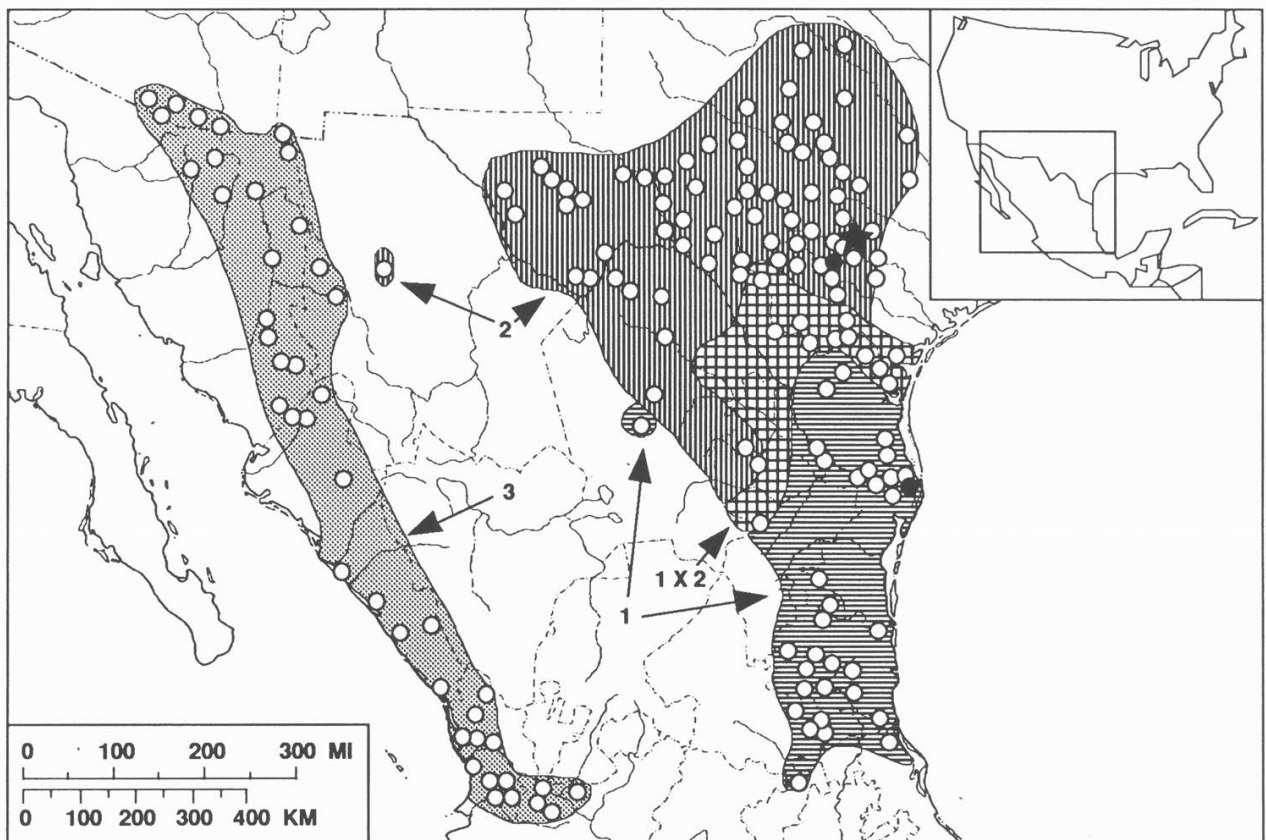
• **Definition.** A medium-sized species of *Eumeces*, with maximum adult size to 76 mm SVL and hatchlings typically 25–26 mm SVL. The scales around midbody are in 26 or 28 parallel rows, with 52–60 dorsal scales from occiput to above the vent. The scale lying medial to the postgenal scale is longer than wide, and 4 supraoculars and 7 upper labials are present. The other head scales are variable: the interparietal may be enclosed by the parietals or not, the prefrontals may be in contact or separated, the postlabials may be single or double, the postnasals present or absent, and the postmental divided or entire. Also present are 1–4 pairs of nuchal scales, 6–9 supraciliaries, and 2–4 postsuboculars. The adult color pattern, if present, consists of a dark lateral band bordered above and below by a light line; these markings may terminate at the shoulder, midbody, or tail base. A dorsal median light line, if present, bifurcates on the nuchal scales and terminates anterior to the midbody. A dorsolateral light line occupies the third and fourth, or only the fourth, scale rows on the neck. A lateral light line passes through the auricular opening. Juveniles have blue tails distally and are much darker in

overall color; the dorsum of hatchlings is as dark as the lateral bands. Secondary pattern loss is common in very large adults, but patternless morphs are known to occur in one subspecies (*callicephalus*).

• **Descriptions.** The original description is by Baird (1858). Other characterizations and discussions of variation are in Bocourt (1879), Boulenger (1887), Cope (1900), Taylor (1935), Smith (1946), Darling and Smith (1954), Stebbins (1954), Legler and Webb (1960), Baker and Webb ("1966" [1967]), Hardy and McDiarmid (1969), Dixon et al. (1972), Lieb (1973), Conant (1975), Robinson (1979), Stebbins (1985), Lieb (1985), and Tanner (1987).

• **Illustrations.** Color illustrations are in Conant (1975), Behler and King (1979), Smith and Brodie (1982), Stebbins (1985), and Garrett and Barker (1987). Black-and-white photographs appear in Taylor (1935), Smith (1946), Werler (1951), Lieb (1973), Treviño-Saldaña (1978), and Lieb (1985). Günther (1885) features a lithographic plate (as *Eumeces bocourti*). Other drawings are in Bocourt (1879), Cope (1900), Kingman (1932), and Stebbins (1954).

• **Distribution.** *Eumeces tetragrammus* is distributed through a variety of grassland and woodland habitats in a broad arc through south-central North America. In eastern México, the species occurs in lowland and subtropical areas in northern Veracruz, eastern San Luis Potosí, northeastern Querétaro, and throughout Tamaulipas (sea level to 1050 m). It is also found in low to moderate elevations of the northern Sierra Madre Oriental, the Coahuila Folded Belt, and in allied ranges in Nuevo León, Coahuila, and Tamaulipas; an isolated enclave of the subspecies *E. t. tetragrammus* occurs in the Cuatros Ciénegas Basin of central Coahuila. In the northern part of its range, the species is found in the southern Gulf Coastal Plain of Texas, inland through the Edwards Plateau to north-central Texas, and then southwest through the Stockton Plateau to the mountains of southwestern Trans-Pecos Texas and immediately adjacent Coahuila (to 2300 m). The species is known at present only from the Sierra del Nido in Chihuahua east of the continental divide region;



**Map.** Open circles show representative localities for the three subspecies; solid circles mark type localities of two of these (see Comment). The star indicates a Pleistocene fossil record. The mixed shading represents an area of intergradation.

west of the continental divide the range extends from southeastern Arizona and extreme southwestern New Mexico and northeastern Chihuahua south through the western slope foothills and barrancas (usually below 1700 m, but apparently up to 2000 m) of the Sierra Madre Occidental of Chihuahua, Sonora, Durango, Sinaloa, Nayarit, Jalisco, and Zacatecas. Pacific coastal plain occurrences are known from central Sinaloa south through Nayarit. Published records for Oklahoma (Ortenburger, 1926) and Arkansas (Dellinger and Black, 1938) are apparently erroneous (Lieb, 1973; Dowling, 1957). The species has been reported from Michoacan (Dugés, 1896), but no extant specimens or localities are known within that state.

• **Fossil Record.** Pleistocene (Late Wisconsin) remains have been found in a cave in Kendall County, Texas (Holman, 1968).

• **Pertinent Literature.** Early literature is annotated by Taylor (1935); regional bibliographies are in Smith and Smith (1973, 1976), and Dixon (1987). Lieb (1985) treated variation, systematics and distribution. Original information on reproduction and/or descriptions of juveniles is in the following: Strecker (1908), Taylor (1943), Werler (1951), Sabath and Worthington (1959), Campbell and Simmons (1961), Zweifel (1962), Baker and Webb ("1966" [1967]), Taylor (1985), and Tanner (1987); a summary of literature dealing with reproduction is in Fitch (1970). Information on distribution, habitat, and/or community associations is in Smith and Taylor (1950b), Lieb (1973), and Morafka (1977); such information for Arizona is summarized by Lowe (1972), and indexed for Texas by Dixon (1987) and for México by Smith and Smith (1976). More recent literature commenting on Mexican populations, not indexed in the latter, include Baker and Webb ("1966" [1967]), McDiarmid et al. (1976), Treviño-Saldaña (1978), Webb (1984), McCoy (1984), McCranie and Wilson (1987), and Tanner (1987). Other published references are few: Kingman (1932) compared skull morphology with other *Eumeces*; Smith and Darling (1952) inferred a predation event; Brattstrom (1965) gave a body temperature value; Guttman (1971) provided a datum on electrophoretic mobility of hemoglobin; DeWeese and Wright (1970) described the karyotype.

• **Etymology.** The names *tetragrammus* (Greek) and *brevilineatus* (Latin) probably refer, respectively, to the "four-lined" and "short-lined" color patterns observed in these subspecies. The name *callicephalus* (Greek, "beautiful-head") has a less clear derivation but probably refers to the light-colored nuchal mark that appears in most individuals of this taxon.

• **Comment.** Cope (1900) designated two USNM specimens of *Eumeces tetragrammus* as variety *funebrosus*; Taylor (1935) could not locate this material, although he suspected they had been mixed with twelve co-types of *E. tetragrammus* proper. Taylor regarded this taxon as invalid; subsequent authors have likewise ignored it.

Cochran (1961) listed the lectotype of *Eumeces brevilineatus* as USNM 10159A; Lieb (1985) gave the lectotype (in error) as USNM 10159B. The latter specimen has subsequently been assigned a different catalogue number, and the lectotype, formerly USNM 10159A, is now USNM 10159.

Smith and Taylor (1950a) restricted the type locality of *Eumeces callicephalus* to Guanajuato, Guanajuato, México. Lieb (1985) noted that this taxon probably does not occur in that state, and that Bocourt's (1879) description is ambiguous as to origin of the type.

*Eumeces humilis* is a substitute name provided by Boulenger (1887) for the preoccupied *E. bocourti*. The Texas-New Mexico specimens that form the basis of Taylor's (1935) treatment of *E. humilis* are *E. multivirgatus*; Robinson (1979) allocated the type material collected by Forrer in México to *E. callicephalus*.

Lieb's (1985) proposal of conspecificity between *E. brevilineatus*, *E. callicephalus*, and *E. tetragrammus* has been disputed by Tanner (1987), who maintains that the allopatric form *callicephalus* should be retained as a distinct species. Clarification of its status will require acquisition of additional material from poorly sampled regions of Chihuahua.

## 1. *Eumeces tetragrammus tetragrammus* (Baird)

*Plestiodon tetragrammus* Baird, 1858:256. See species synonymy. *Eumeces tetragrammus funebrosus* Cope, 1900:661. Type-locality, "Matamoros, [Tamaulipas], Mexico." Syntypes, National Museum of Natural History (USNM) 3120 (2 specimens), age and sex unknown, collected by Darius Nash Couch, date of collection unknown (not examined by author). See Comment.

*Eumeces tetragrammus tetragrammus*: Lieb, 1985:11.

• **Definition.** The dark lateral band, dorsolateral and lateral light lines are present throughout the length of the body; a dorsal median light line is absent; the interparietal is not enclosed by parietals; postnasals are usually absent; postlabials are usually double.

## 2. *Eumeces tetragrammus brevilineatus* Cope

*Eumeces brevilineatus* Cope, 1880:18. Type-locality, "near Helotes Creek, ... twenty miles northwest of San Antonio, [Bexar County, Texas]." Lectotype, designated by Taylor (1935), National Museum of Natural History (USNM) 10159, adult, sex unknown, one of two cotypes collected by Gabriel W. Marnock, date of collection unknown (examined by author). See Comment.

*Eumeces tetragrammus brevilineatus*: Lieb, 1985:11.

• **Definition.** The lateral body striping terminates anterior to midbody; the dorsal median light line and bifurcating mark on nuchals are absent in all but the westernmost populations; the interparietal is usually not enclosed by parietals; postnasals present or absent; postlabials are usually double.

## 3. *Eumeces tetragrammus callicephalus* Bocourt

*Eumeces callicephalus* Bocourt, 1879:431. Type-locality, "Guanajuato, [Guanajuato], (Mexique)," restricted by Smith and Taylor (1950a) but probably in error (see Comment). Holotype, Muséum National d'Histoire Naturelle 1643, adult, sex unknown, collected by Alfredo Dugés, date of collection unknown (not examined by author).

*Eumeces bocourti* Boulenger, 1883:63. Type-locality, "Presidio, Mexico." Syntypes, British Museum of Natural History 8.20.66-67, one an adult, the age of other and sex of both unknown, collected by Alphonso Forrer, date of collection unknown (not examined by author).

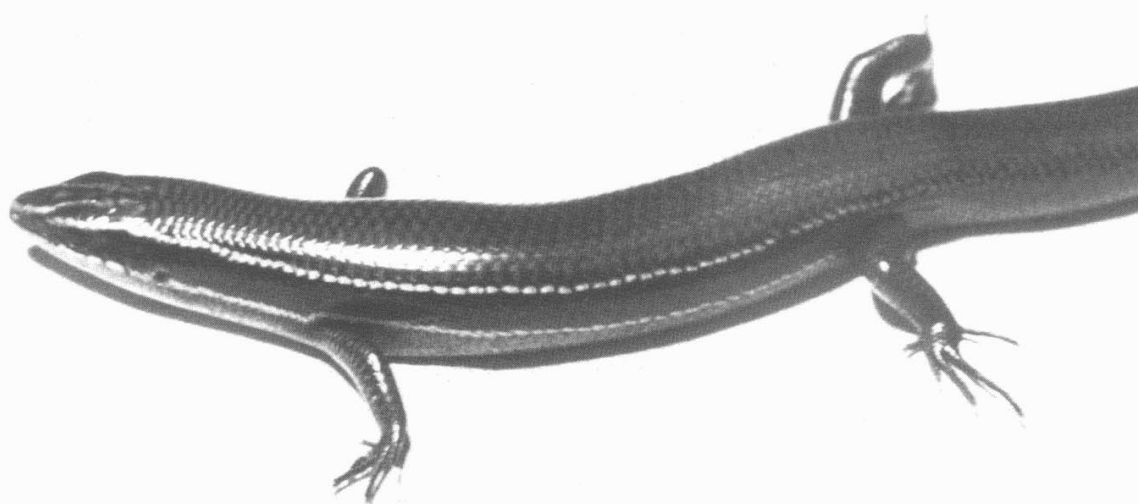
*Eumeces humilis*: Boulenger, 1887:377. See Comment.

*Eumeces tetragrammus callicephalus*: Lieb, 1985:11.

• **Definition.** The dark lateral stripe is usually present throughout the length of the body; a short dorsal median light line and bifurcating head lines are usually present; the interparietal may be enclosed by parietals or not; postnasals often present; postlabials usually single.

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**Figure.** *Eumeces tetragrammus*, young adult, from Sierra San Carlos, Tamaulipas, México. Photograph by author.

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Primary editor for this account, Andrew H. Price.

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